TLE NOTATIONS

ered in NID File ..✓.....
cation Map Pinned ..✓.....
rd Indexed .....

Checked by Chief ✓.....
Approval Letter .....
Disapproval Letter .....

COMPLETION DATA:

ate Well Completed 9-25-76

..... WW..... TA.....
GW..... OS..... PA.✓...

Location Inspected .....
Bond released
State or Fee Land .....

LOGS FILED

Driller's Log.....✓.....
Electric Logs (No.) ✓.....
E..... I..... Dual I Lat..... GR-N..... Micro.....
BHC Sonic GR..... Lat..... Mi-L..... Sonic.....
CBLog..... CCLog..... Others.....

Plugged & Abandoned- 9/25/78

THE ANSCHUTZ CORPORATION

1110 DENVER CLUB BUILDING
518 SEVENTEENTH STREET
DENVER, COLORADO 80202
TELEPHONE 303—573-5665

February 16, 1978

Mr. Cleon Feight
Director
Division of Oil, Gas & Mining
1588 West, North Temple
Salt Lake City, Utah 84116

Re: Applications to Drill:
Bar Creek Unit #4, NE NW
Sec. 30, T.17S, R.26E,
Grand County, Utah

Bar Creek Unit #5, NE NE
Sec. 30, T.17S, R.26E,
Grand County, Utah

Dear Mr. Feight:

We wish to submit the enclosed application to drill the above referenced locations: These are both federal leases.

If you have any questions, please call.

Thank you.

Sincerely,

W. Lee Kuhre

W. Lee Kuhre
Operations Coordinator

WLK/mle
Enclosure

Form 9-331C

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS

SUBMIT IN TRIPLICATE (Other instructions on reverse side)

THIS IS A FEDERAL LEASE

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. Lease Designation and Serial No.

6. If Indian, Allottee or Tribe Name

1a. Type of Work
DRILL [X] DEEPEN [ ] PLUG BACK [ ]

7. Unit Agreement Name

b. Type of Well
Oil Well [ ] Gas Well [ ] Other Single Zone [ ] Multiple Zone [ ]

8. Farm or Lease Name
Bar Creek Unit

2. Name of Operator
THE ANSCHUTZ CORPORATION

9. Well No.
5

3. Address of Operator
1110 Denver Club Building, Denver, Colorado 80202

10. Field and Pool, or Wildcat
Stateline Field
Bar Creek (area)

4. Location of Well (Report location clearly and in accordance with any State requirements.)
At surface
660' FNL, 660 FEL NE NE Sec. 30

11. Sec., T., R., M., or Blk. and Survey or Area

At proposed prod. zone
same

30-T. 17S-R. 26E

14. Distance in miles and direction from nearest town or post office*
39 miles from Thompson, Utah (Exhibit "E")

12. County or Parrish
Grand

13. State
Utah

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. line, if any)
660'

16. No. of acres in lease
640

17. No. of acres assigned to this well
160A

18. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft.
3000'

19. Proposed depth
2260'

20. Rotary or cable tools
Rotary

21. Elevations (Show whether DF, RT, GR, etc.)
5003' GR - 5010' KB

22. Approx. date work will start*

RECEIVED
FEB 21 1978
DIVISION OF OIL, GAS, & MINING

23.

PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
12¼"	8-5/8"	24#	200'	180 sx (to surface)
6-3/4"	4½"	9.5#	2420'	200 sx

1. BOP test recorded daily
2. Logs at total depth

Test the dakota, Morrison, Salt Wash, formations. A blowout preventer will be installed on the casing head, and a rotating head will be installed on top of the blowout preventer for air drilling. Any gas zones encountered will be flared at the end of the blooie line and checked for volume thru 2" lines off the casing head after the pipe rams have been closed. The blooie line 100' in length will be attached to the rotating head and extended into the reserve pit. A flare will be maintained at the end of the blooie line at all times while drilling below 1000'. In the event of commercial production, 4½" casing will be set with sufficient cement to cover 250' above the top of the Dakota formation.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

Signed W. Lee Kuhre W. Lee Kuhre Title Operations Coordinator Date 2-6-78

(This space for Federal or State office use)

Permit No. 43-019-30425 Approval Date APPROVED BY THE DIVISION OF OIL, GAS, AND MINING

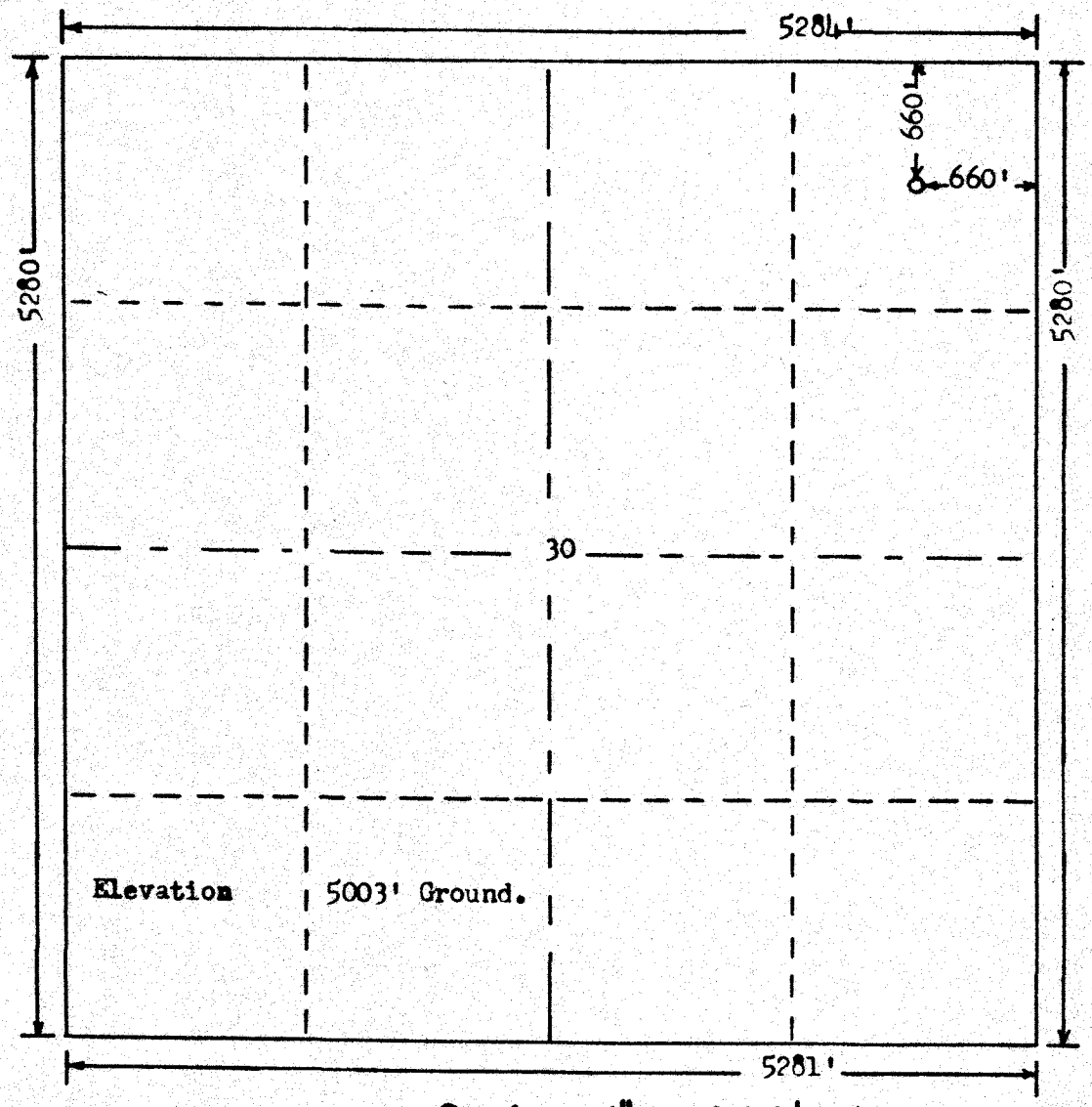
Approved by Cause #165-1 Title DATE: 2-28-78

Conditions of approval, if any: BY: C.B. Feight

*See Instructions On Reverse Side

FORM F-106

R. 26 E.



N

T. 17 S.

Scale... 1" = 1000'

Powers Elevation Company, Inc. of Denver, Colorado has in accordance with a request from Lee Kuhre for Anschutz Corporation determined the location of #5 Bar Creek Unit to be 660'FN & 660'FE Section 30 Township 17 S. Range 26 E. of the Salt Lake Principal Meridian Grand County, Utah

I hereby certify that this plat is an accurate representation of a correct survey showing the location of #5 Bar Creek Unit

Date: 1-17-78

Licensed Land Surveyor No. 2711
State of Utah

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

** FILE NOTATIONS **

Date: Feb. 24, 1978

Operator: Anschutz Corp.

Well No: Bar Creek #5

Location: Sec. 30 T. 17S R. 26E County: Grand

File Prepared: / ✓ / *Entered on N.I.D.:* / ✓ /

Card Indexed: / ✓ / *Completion Sheet:* / ✓ /

API NUMBER: 43-019-30425

CHECKED BY:

Administrative Assistant OK

Remarks:

Petroleum Engineer OK PD

Remarks:

Director ✓

Remarks:

INCLUDE WITHIN APPROVAL LETTER:

Bond Required: OK *Survey Plat Required:* / /

Order No. 165-1 / ✓ / *Surface Casing Change to* / /

Rule C-3(c), Topographic exception/company owns or controls acreage within a 660' radius of proposed site / /

O.K. Rule C-3 / / *O.K. In* Bar Creek *Unit* / ✓ /

Other:

/ ✓ / ~~Letter Written~~ Approved

June 28, 1978

MEMO TO FILE

Re: Anschutz Corporation
Well No. Bar Creek Unit #5
Sec. 30, T. 17S., R. 26E.
Grand County, Utah

This well had not been spudded-in at the time of the visit.

CLEON B. FEIGHT
DIRECTOR
DIVISION OF OIL, GAS, & MINING

CBF/ksw

THE ANSCHUTZ CORPORATION

1110 DENVER CLUB BUILDING
518 SEVENTEENTH STREET
DENVER, COLORADO 80202
TELEPHONE 303—573-5665
TWX 910 931 2620

July 18, 1978

State of Utah
Dept. of Natural Resources
Division of Oil, Gas, and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Attention: Kathy Ostler, Records Clerk

Dear Ms. Ostler:

As requested in your letter of June 8, 1978 the following is submitted.

To update your records the following wells have not yet been drilled and our plans have not changed.

Well No. Federal 258-#4, Sec. 5, T. 18S, R. 24E,
Grand County, Utah

Well No. Federal 335-#2, Sec. 20, T. 19S, R. 23E,
Grand County, Utah

Well No. Federal 335-#4, Sec. 19, T. 19S, R. 23E,
Grand County, Utah

Well No. Federal 350-#1, Sec. 4, T. 18S, R. 24E,
Grand County, Utah

Well No. State 400-#1, Sec. 17, T. 16S, R. 23E,
Grand County, Utah

Well No. State 402-#1, Sec. 36, T. 17S, R. 20E,
Grand County, Utah

Well No. State 404-#1, Sec. 23, T. 17S, R. 21E,
Grand County, Utah

Well No. State 411-#2, Sec. 23, T. 18S, R. 20E,
Grand County, Utah

Well No. State 414-#1, Sec. 32, T. 18S, R. 21E,
Grand County, Utah

-over-

Well No. State 915-#1, Sec. 17, T. 16S, R. 22E,
Grand County, Utah

Well No. State 920-#1, Sec. 28, T. 16S, R. 21E,
Grand County, Utah

Well No. Ten Mile State 921-#1, Sec. 34, T. 16S, R. 21E,
Grand County, Utah

Well No. Bar Creek Unit #4, Sec. 30, T. 17S, R. 26E,
Grand County, Utah

Well No. Bar Creek Unit #5, Sec. 30, T. 17S, R. 26E,
Grand County, Utah

We do not presently plan to drill the Well No. State 492-#1, Sec. 2, T. 19S, R. 21E, Grand County, Utah.

We have recently drilled and either completed or abandoned the following wells. Reports are forthcoming under a separate cover.

Well No. Federal 258-#2, Sec. 5, T. 18S, R. 24E,
Grand County, Utah

Well No. Federal 258-#3, Sec. 5, T. 18S, R. 24E,
Grand County, Utah

Well No. Anschutz State Line 28-1, Sec. 28, T. 4N, R. 8E,
Summit County, Utah

Well No. Federal 258-#5, Sec. 8, T. 18S, R. 24E,
Grand County, Utah

Well No. 769-#1, Sec. 19, T. 19S, R. 21E,
Grand County, Utah

Well No. Federal 104-#1, Sec. 4, T. 20S, R. 21E,
Grand County, Utah

Well No. Federal 675-#2, Sec. 9, T. 20S, R. 21E,
Grand County, Utah

Form 9-331 C*
(May 1963)

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: The Anschutz Corporation

3. ADDRESS OF OPERATOR: 1110 Denver Club Building, Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 660' FNL, 660 FEL NE NE Sec. 30
At proposed prod. zone: Same

RECEIVED
AUG 30 1978
DIVISION OF OIL, GAS, & MINING

5. LEASE DESIGNATION AND SERIAL NO.: U-16925
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME: Bar Creek Unit
8. FARM OR LEASE NAME: Bar Creek Unit
9. WELL NO.: 5
10. FIELD AND POOL, OR WILDCAT: Bar Creek (area)
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 30-T.17S-R.26E
12. COUNTY OR PARISH: Grand
13. STATE: Utah

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 39 miles from Thompson, Utah (Exhibit "E")

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 660'
16. NO. OF ACRES IN LEASE: 640
17. NO. OF ACRES ASSIGNED TO THIS WELL: 160A
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 3000'
19. PROPOSED DEPTH: 2260'
20. ROTARY OR CABLE TOOLS: Rotary
21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5003' ungraded ground elevation, 5010' KB
22. APPROX. DATE WORK WILL START*:

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12¼"	8-5/8"	24#	200'	180 sx (To surface)
6-3/4"	4-1/2"	9.5#	2420'	200 sx

Exhibits Attached
"A" Location and Elevation Plat
"B" The Ten-Point Compliance Program
"C" The Blow-out Preventer Diagram
"D" The Multi-point Requirement for A.P.D.
"E" Access road map of well in area
"F" Drill Pad Layout, Contours, and Cut-Fill Section
"G" Drill Rig Layout
"H" Production Facility Layout

It is planned to test the sands in the Dakota, Morrison and Salt Wash formations. These wells will be air drilled, mudding up if necessary. Gas zones encountered will be checked for volume through 2" lines off the casing head after the pipe rams have been closed. The blooie line of at least 100' in length will extend from the rotating head into the reserve pit. A flare will be maintained at the end of the blooie line at all times while drilling below 1000'. In the event of commercial production, 4½" casing cemented 250' above the top of the Dakota formation.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED W. Lee Kuhre — W.Lee Kuhre — TITLE Operations Coordinator — DATE 2-20-78

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY (Orig. Sgd.) E. W. Guynn — TITLE DISTRICT ENGINEER — DATE AUG 29 1978

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED TO OPERATOR'S COPY

NOTICE OF APPROVAL

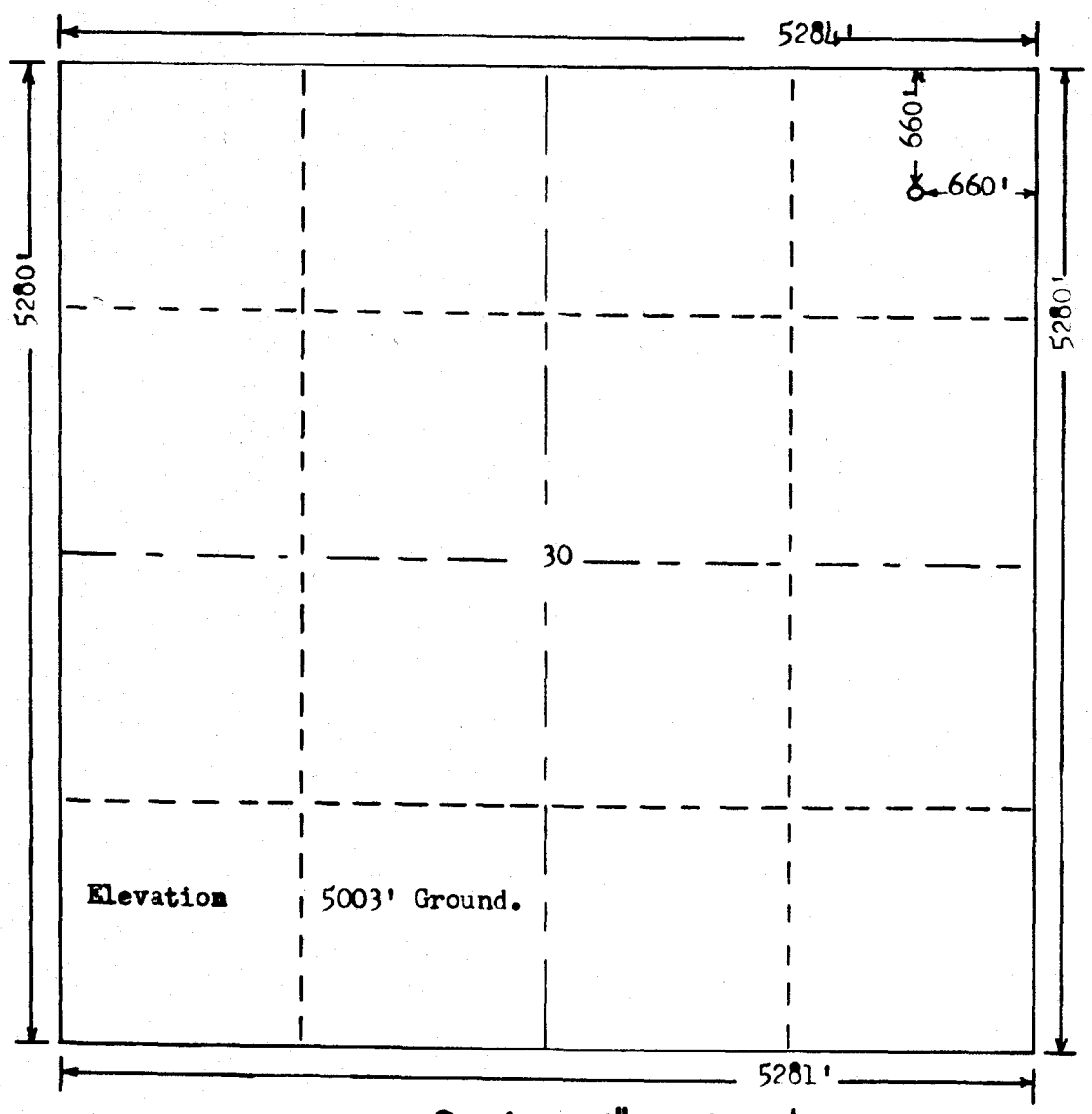
*See Instructions On Reverse Side

NECESSARY FLARING OF GAS DURING DRILLING AND COMPLETION APPROVED SUBJECT TO ROYALTY (NTL-4)

State O&G

FORM F-106

R. 26 E.



N

T. 17 S.

Scale... 1" = 1000'

Powers Elevation Company, Inc. of Denver, Colorado has in accordance with a request from Lee Kuhre for Anschutz Corporation determined the location of #5 Bar Creek Unit to be 660'FN & 660'FE Section 30 Township 17 S. Range 26 E. of the Salt Lake Principal Meridian Grand County, Utah

I hereby certify that this plat is an accurate representation of a correct survey showing the location of #5 Bar Creek Unit

Date: 1-17-78

Licensed Land Surveyor No. 2711
State of Utah

Oil and Gas Drilling EA No. 950

United States Department of the Interior
Geological Survey
8440 Federal Building
Salt Lake City, Utah 84138

Usual Environmental Analysis

Lease No. U-16925

Operator Anschutz Corporation Well No. 5

Location 660' FNL & 660' FEL NENE Sec. 30 T. 17S R. 26E

County Grand State Utah Field Bar Creek

Status: Surface Ownership Public Minerals Federal

Joint Field Inspection Date March 30, 1978

Participants and Organizations:

John Evans	U.S.G.S.
Rocky Curvutt	BLM
Lee Kuhre	Anschutz Corp.
Richard Roth	Mike's Water & Dozer Service
Neal Swisher	C & W Contracting Co.

Related Environmental Analyses and References:

(1)

(2)

Analysis Prepared by: John T. Evans
Environmental Scientist
Salt Lake City, Utah

Date May 19, 1978

NOTED JOHN T. EVANS, JR.
5/19/78

Proposed Action:

On February 24, 1978, Anschutz Corporation filed an Application for Permit to Drill the No. 5 exploratory well, a 2,260' gas test of the Dakota, Morrison, and Saltwash formations; located at an elevation of 5,003' in the NE¼NE¼ section 30, T. 17S., R. 26E on Federal mineral lands and public surface; lease No. U-16925. There was no objection raised to the wellsite. As an objection was raised to the access road, it was changed. Access road will come in on the lower edge of location to have less cut and fill as road crosses wash. A concrete apron may be necessary in wash if production is established.

A rotary rig would be used for the drilling. An adequate casing and cementing program is proposed. Fresh water sands and other mineral-bearing formations would be protected. A Blowout Preventer would be used during the drilling of the well. The proposed pressure rating should be adequate. Details of the operator's NTL-6 10-Point Subsurface and 13-Point Surface Protection Plans are on file in the U.S.G.S. District Office in Salt Lake City, Utah and the U.S.G.S. Northern Rocky Mountain Area Office in Casper, Wyoming. The drilling operation would begin within 30 days upon approval of the A.P.D. and would be expected to last 20 days to reach total depth and complete the well for production if hydrocarbons are discovered.

A working agreement has been reached with the Bureau of Land Management the controlling surface agency. Rehabilitation plans would be decided upon as the well neared completion; the Surface Management Agency would be consulted for technical expertise on those arrangements. Written concurrence of the surface managing agency is attached.

Location and Natural Setting:

The proposed drillsite is approximately 12 miles North of Harley Dome, Utah. A fair road runs to within 1,000' of the location. This well is in the Bar Creek field.

The overall topography consists of gently sloping hills cut be non-perennial drainages. The location is on sandy hills. The surface geology is Mancos. The soil is sandy. No geologic hazards are known near the drillsite. Seismic risk for the area is minor. Anticipated geologic tops are filed with the 10-Point Subsurface Protection Plan. No mining of any sort is anticipated in the area. The land is used primarily for grazing. The climate is semi-arid with abundant sunshine, hot summers and cold winters with temperature variations on a daily and seasonal basis. Annual precipitation is 6 - 10 inches. Winds are medium and gusty, occurring predominately from West to East. Air mass inversions are rare.

The area eventually drains into the Bitter Creek subsystem of Colorado River. The depths of fresh-water formations are listed in the 10-Point Subsurface Protection Plan.

Vegetation consists of sagebrush and native grasses. Mammalian wildlife in the area include deer, coyote, skunk, rabbit, prairie dog, small gophers, and mice. There are numerous prairie and mountain birds in the general area, including aquatic birds and birds of prey. Snakes and small lizards are also present on a seasonal basis. The Bureau of Land Management has made a plant and animal inventory. There are no known endangered or threatened plant or animal species in the area.

There are no known historical, cultural or archaeological sites in the area. A cultural resource clearance would be obtained from the Bureau of Land Management. There are no national, state, or local parks, forests, wildlife refuges or ranges, grasslands, monuments, trails, or other formally designated recreational facilities near the proposed location.

The proposed location is within the Book Mountain Planning Unit. This Environmental Assessment Record was compiled by the Bureau of Land Management, the surface managing agency of the Federal surface in the area.

The study includes additional information on the environmental impact of oil and gas operations in this area and gives land use recommendations. The E.A.R. is on file in the agency's State offices and is incorporated herein by reference.

Effects on the Environment by the Proposed Action:

The wellpad would disturb approximately 2 acres. The access road would disturb approximately .5 acre. An estimated 2' cut and 6' fill would be necessary to level the pad area. The vegetation would be removed and minor relocation of wildlife in the immediate area, particularly small rodents, would be anticipated. Production facilities would be placed on disturbed area of drillpad. Construction of flowlines would disturb long, narrow strips of the surface for a short period of time.

The mud and reserve pits would contain all fluids used during the drilling operations. The potential for fluid spills, gas leaks, and related accidents would be present. If the well should be productive, precautions would be taken against such accidents. Toxic or noxious gases would not be anticipated.

Some additional erosion would be expected in the area since surface vegetation would be removed. If erosion became serious, drainage systems such as water bars and dikes would be installed to minimize the problem. There would be no tangible effect on water migration in fresh water aquifers. The pits would be unlined. If fresh water should be available from the well, the owner or surface agency may request completion as a water well if given approval~~ under NTL-2B~~.

Waterways would not be affected directly due to their distance from the site. If oil production is established a berm around drillpad would prevent contamination to a non-perennial wash.

Noise levels would be moderately high during drilling and completion operations. Upon completion, noise levels would be infrequent and significantly less. If the area is abandoned, noise levels should return to pre-drilling levels.

Relatively heavy traffic would be anticipated during the drilling operations phase, increasing dust levels and exhaust pollutants in the area. If the well was to be completed for production, traffic would be reduced substantially to a maintenance schedule with a corresponding decrease of dust levels and exhaust pollutants to minor levels. If the project results in a dry hole, all operations and impact from vehicular traffic would cease after abandonment. Due to the limited number of service vehicles and limited time span of their operation, the air quality would not be substantially reduced.

A trash pit would be utilized for any solid wastes generated at the site and would be buried at the completion of the operations. Sewage would be handled according to State sanitary codes. For further information, see the 13-Point Surface Plan.

The animals and vegetation of the area would be disturbed for the life of the project. If the project was to produce hydrocarbons, adjustments in habitat occupancy would be expected. At abandonment, normal rehabilitation of the area such as contouring, reseeding, etc., would be undertaken with an eventual return to the present status as outlined in the 13-Point Surface Plan.

The site is not visible from any major roads. After drilling operations, completion equipment would be visible to passersby of the area, but would not present a major intrusion.

Should the wellsite be abandoned, surface rehabilitation would be done according to the surface agency's requirements and to U.S.G.S.'s satisfaction. This would involve leveling, contouring, reseeding, etc., of the location and possibly the access road. If the well should produce hydrocarbons, measures would be undertaken to protect wildlife and domestic stock from the production equipment. The anticipated traffic would have a minimal impact on ranch traffic and vehicular safety problems. Normal precautions would be employed to prevent damage or injury to ranch property and personnel. Aside from recreational activities such as hunting, the only other human conflicts that would arise in normal useage of the area would be the oil and gas operations.

These would be minor, with planned precautions to limit such conflict.

The economic and environmental impact of a single well is normally somewhat negligible. But should this well discover a significant new hydrocarbon source, local, state, and possibly national economics might be improved. In this instance, other development wells would be anticipated, with substantially greater environmental and economic impacts.

Alternatives to the Proposed Action:

1. Under leasing provisions, the Geological Survey has an obligation to allow mineral development if the environmental consequences are not too severe or irreversible. Upon rehabilitation of the site, the environmental effects of this action would be substantially mitigated, if not totally annulled. Permanent damage to the surface and subsurface would be prevented as much as possible under U.S.G.S. and Bureau of Land Management supervision with rehabilitation planning reversing almost all effects. Additionally, the growing scarcity of oil and gas should be taken into consideration. Therefore, the alternative of not proceeding with the proposed action at this time is rejected.

2. Minor relocation of the wellsite or modifications to the proposed program would not significantly reduce the environmental impact. There are no severe vegetative, animal or archaeological-historical-cultural conflicts at the site. Since only a minor impact on the environment would be expected, the alternative of moving the location is rejected. The access road was moved to cross wash at a point requiring less cuts and fills.

Adverse Environmental Effects which cannot be Avoided:

Surface scars resulting from construction work, wellpad and the access road would be visible for the life of the project and for a period of time after abandonment while rehabilitation is completed. The disturbed areas would not be available for grazing and farming purposes during the project's life time.

Minor relocation of wildlife, notably small rodents, in the immediate area would be anticipated. Some erosion would be anticipated with the removal of vegetative cover. Dust levels and exhasut pollutants would increase somewhat during the construction and drilling phases of the operation. Traffic hazards though few, would be present. Noise levels would increase during construction and drilling and would remain somewhat increased if the well was completed and a pumping unit installed. The potential for fluid spills, gas leaks, and related accidents would be present. If hydrocarbons are discovered and produced, further oil and gas development of the area would be expected to occur which would result in the extraction of an irreplaceable resource, and further negative environmental impacts.

Determination:

This requested action does not constitute a major Federal Action significantly affecting the environment in the sense of NEPA, Section 102 (2)(c).

District Engineer:
Salt Lake City, Utah

E. W. Guynn

RETURN

(Submit in Triplicate) U.S. GEOLOGICAL SURVEY

RECEIVED

SEP 26 1978

CASPER, WYOMING

DESIGNATION OF AGENT

Supervisor, Oil and Gas Operations:

The undersigned is, on the records of the Geological Survey, Unit Operator under the Bar Creek #5 unit agreement, Grand County, Utah (state), No. 14-08-001-16018 approved December 21, 1977 and hereby designated:

NAME: Willard Pease Oil & Gas Company

ADDRESS: 570 Kennecott Building
Salt Lake City, Utah 84133

as its agent, with full authority to act in its behalf in complying with the terms of the Unit Agreement and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Oil and Gas Operating Regulations with respect to drilling, testing, and completing unit well No. 5, in the NE¼NE¼ Sec. 30, T. 17S, R. 26E, SLM, Grand County, Utah.

It is understood that this designation of agent does not relieve the Unit Operator of responsibility for compliance with the terms of the unit agreement and the Oil and Gas Operating Regulations. It is also understood that this designation of agent does not constitute an assignment of any interest under the unit agreement or any lease committed thereto.

In case of default on the part of the designated agent, the Unit Operator will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The Unit Operator agrees promptly to notify the oil and gas supervisor of any change in the designated agent.

This designation of agent is deemed to be temporary and in no manner a permanent arrangement.

This designation is given only to enable the agent herein designated to drill the above-specified unit well. Unless sooner terminated, this designation shall terminate when there is filed in the appropriate district office of the U.S. Geological Survey a completed file of all required Federal reports pertaining to subject well. It is also understood that this designation of agent is limited to field operations and does not cover administrative actions requiring specific authorization of the Unit Operator.

ACCEPTED SEP 29 1978

Acting Area Oil & Gas Supervisor
Geological Survey
Casper, Wyoming

8-18-78

THE ANSCHUTZ CORPORATION
Unit Operator

By: Miles Williams
Miles A. Williams Vice President

FROM: District Geologist, Salt Lake City, Utah

TO: District Engineer, Salt Lake City, Utah

SUBJECT: ADP supplemental stipulations

Operator: The Anschutz Corp Well: 5

Grand Co., Utah

Lease No. U-16295 660 FNL 660 FEL (NE¼ NE¼) sec. 30 T. 17 S., R. 26 E. SLM

1. Operator picked tops are adequate? Yes X, No ___. If not: The following are estimated tops of important geologic markers:

Formation	Depth

Formation	Depth

2. Possible fresh water aquifers present below surface casing? Yes ___, No X. If yes: Surface casing program may require adjustment for protection of fresh water aquifers to a depth of approximately _____ feet in the _____ Formation.

3. Does operator note all prospectively valuable oil and gas horizons? Yes X, No ___. If not: The following additional horizons will be adequately logged for hydrocarbons:

Unit	Depth

Unit	Depth

4. Any other leasable minerals present? Yes ___, No X. If yes: 1. Logs (_____ *) will be run through the _____ ** at approximate depths of _____ to _____ feet to adequately locate and identify anticipated _____ beds. 2. Logs (_____ *) will be run through the _____ ** at approximate depths of _____ to _____ feet to adequately locate and identify anticipated _____ beds. 3. Logs (_____ *) will be run through the _____ ** at approximate depths of _____ to _____ feet to adequately locate and identify anticipated _____ beds.

5. Any potential problems that should be brought to operators attention (e.g. abnormal temperature, pressure, incompetent beds, H_2S)? Yes ___, No X. If yes, what?

6. References and remarks: In Bar-X Field KGS

Ref: USGS Map I-736

* From 10 pt or others as necessary. ** Members, Formations.

Date: March 1, 1978 Signed: James F. Kohler

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: U-16925

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other Dry Hole

7. UNIT AGREEMENT NAME: Bar Creek

8. FARM OR LEASE NAME: Federal-Anschutz

2. NAME OF OPERATOR: Willard Pease Oil & Gas Co.

9. WELL NO.: Bar Ck Unit #5

3. ADDRESS OF OPERATOR: 570 Kennecott Bldg., Salt Lake City, Utah 84133

10. FIELD AND POOL, OR WILDCAT: Stateline

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*

At surface: NE. NE. Sec. 30, T 17S, R 26E, S.L.M.

At top prod. interval reported below: 660' fr. N-line and 660' fr.E-line

At total depth

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: NE. NE. Sec. 30, 17S-26E S.L.M.

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
		Grand	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
Sept 22,78	Sept 25,'78	None	5003' grd; 5013' K.B.	—

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
2445'		None	→	0-2445'	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: None

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: Dual-Induction-Laterolog; Gamma-Density-CNL

27. WAS WELL CORED: No

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24.00	150' K.B.	12¼"	120 sks	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
	None			

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
	None	

31. PERFORATION RECORD (*Interval, size and number*): None

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
None	

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
None		D & A

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
None				None			

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS: Drilling History and Geologic Report

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED W. Don Quigley TITLE Consulting Geologist DATE Nov. 8, 1978

*(See Instructions and Spaces for Additional Data on Reverse Side)

DRILLING HISTORY

AND

GEOLOGIC REPORT

ON

WILLARD PEASE OIL & GAS CO.

BAR CREEK UNIT #5 WELL

GRAND COUNTY, UTAH

By

W. Don Quigley
Consulting Geologist
Salt Lake City, Utah

November 7, 1978

DRILLING HISTORY
AND
GEOLOGIC REPORT
ON
WILLARD PEASE OIL & GAS CO.
BAR CREEK #5 WELL
GRAND COUNTY, UTAH

Operator: Willard Pease Oil & Gas Co.
570 Kennecott Bldg., Salt Lake City, Utah 84133

Contractor: Willard Pease Drlg. Co.
P.O. Box 548, Grand Junction, Colo., 81501

Location: NE NE Sec. 30, T 17S, R 26E, S.L.M., Grand County, Utah (660' fr. N-line and 660' fr. E-line)

Elevations: 5003' grd.; 5013' K.B.

Spudded-in: September 22, 1978

Finished Drlg: September 25, 1978

Total Depth: 2445'

Surface Casing: 8 5/8", 24.00#, K-55, R-3 landed at 150' K.B. and cemented w/120 sks of cement and 3% CaCl and returns to surface.

Bottom Formation: Entrada

Production Zone: None

Plugged and Abandoned: September 25, 1978

Drilling History

Sept. 20-21: Moving in W. Pease Drlg. Co. Rig No. 1 and rigging up.

Sept. 22: Drilled mouse hole and rat hole. Drilled surface hole (12¼") to 162' in 4 hours with Bit #1 (Hughes-retipped). Ran 4 jts of 8 5/8", 24.00#, R-3, K-55 casing and landed at 150' K.B. Cemented casing with 120 sks reg. cement w/3% CaCl. Had returns to surface. Waited on cement to set. Nippled-up.

Sept. 23: Drilled 162' to 1976' (1814'). Finished nippling-up. Began drilling below surface casing at 2:30 A.M. with 7 7/8" bit and using air for circulation. Drilling at rate of 120 ft/hr. in Mancos shale. Had small flare of gas (2' flare) at 1590' which was in the Dakota silt zone. Est. top of Dakota at 1700' but no samples were caught—so hard to tell. Encountered water at 1750' and had to convert to mist-drilling with air-soap-water. Had red shale at 1875' so must be in Morrison.

Sept. 24: Drilled 1976' to 2413' (437'). Based on drilling break and a brown fine grained sandstone at 2300', decided that this was the Entrada. Drilled to 2350' and logged hole. Ran Dual-Induction-Laterolog and Density-Gamma-CNL logs. Finished logging at 3 P.M. Based on logs, found that the Entrada had not been reached so had to go back in hole and drill deeper. Sent logs to Anschutz in Denver by Frontier Airlines. Logs indicated Entrada would be at 2390'. Encountered Entrada at 2385'.

Sept. 25: Drilled 2413' to 2445' (32'). Had no shows in top of Entrada so drilled to 2445' and came out of hole in preparation to plug and abandon hole. Bit #2 (Reed-FP54J) made 2283' (162' to 2445') in 32 3/4 hrs. Drilled at avg. rate of 70 ft/hr. Laid down drill collars and went back to bottom with drill pipe. Placed cement plugs as follows:

Plug #1 - 2445' to 2300' (50 sks) across top of Entrada formation.
Plug #2 - 2175' to 2100' (25 sks) across top of Salt Wash section.

Plug #3 - 1850' to 1650' (60 sks) across
Cedar Mountain and Dakota formations.
Plug #4 - 175' to 100' (25 sks) across
bottom of surface casing.
Plug #5 - 10 sks of cement with well marker
in top of surface casing.

Began rigging down.

All Papers, cans, and trash are to be picked up. All material removed from location. Rat hole and mouse hole are to be filled-in. Reserve pit is to be covered and levelled as soon as possible and the location is to be recontoured and smoothed out. The roads are to be levelled and returned to normal. The location will be reseeded at a later date.

GEOLOGIC REPORT
ON
BAR CREEK #5 WELL

Introduction

The Bar Creek Unit #5 well was located approximately ½ mile southeast of the first Bar Creek Unit #1 well which was completed for a good natural gas well in a sand in the Brushy Basin section of the Morrison formation. The location of the well was chosen so as to be structurally higher than the #1 well and to be near the axis of the Stateline structure. This was probably a mistake because the axis and east flank of this structure have been drilled before without success. The natural gas appears to have been generated in areas to the north and accumulated in sand lenses north of Stateline structure. Likewise, well positions close to the outcrop to the south have been unsuccessful and the sand lenses are flooded with fairly fresh water.

The subject well was drilled within a three-day period using air for circulation. The actual drilling time from bottom of surface casing to total depth, 2445', was only 33 hours. The total depth was about 60 feet below the top of the Entrada formation.

No samples of the cuttings were taken on this hole due to poor communications with the contracting company; thus information on shows of hydrocarbons is minimal. There was a small flare of gas, 5 ft. in length, on a connection at 1383'. According to the E-logs, this show of gas probably came from a silty sand in the Mancos at 1370' to 1385'. Additional small flares of gas, 5 to 6 ft. in length for 2 seconds, were noted on connections at 1602', 1633', 1664', 1695', and 1726'. There was probably some additional gas (very small amount) in the silt section, 'Dakota Silt', at 1610' to 1675'. The Dakota sand at 1710' to 1735' was wet and required conversion to mist-drilling with air-soap-water. Small flares of gas, 5 to 6 ft. long for 2 to 3 seconds, were noted on some connections down to about 2050'; but there were no increases or additional gas zones.

The amount of gas obtained in the subject well was much too small to warrant setting casing and completing as a gas well. The well was, therefore, plugged and abandoned on Sept. 25, 1978.

General Geology

The subject well was located on or near the axis of the Stateline Anticline which is a symmetrical anticline trending nearly eastwest and parallel to the Bar-X Anticline to the north. The anticline has several transverse faults, trending northeastward, with displacements of 50 to 150 feet and downthrown on the west side.

The natural gas reservoirs in the area are found in lenticular sands in the Dakota, Cedar Mountain and Morrison formations. These sand lenses are quite irregular and variable and seem to have limited continuity. In general, they trend northeastward in the area, but tend to have very irregular elongated shapes. They were deposited by aggrading streams and represent stream

channels, bar sands, and flood or alluvial sands. Interfingering and overlaps are common. Communication between the lenses tend to be minimal. Because of their erratic nature, one well does not prove or condemn a very large area. Wells on adjacent 40-acre tracts can be quite different.

The subject well was about 150' higher structurally than the Bar Creek Unit #1 well, located about ½ mile to the northwest of the subject well. Part of this structural difference is due to an intervening fault, trending northeastward, between the two wells. The subject well is on the upthrown side of the fault.

The subject well encountered a normal sequence of sediments with normal thicknesses. The development of sand lenses in the potentially productive formations was less than in the Bar Ck Unit #1 well, but was fairly normal. The Dakota formation contained only one fairly thick sand lens in the subject well compared to three separate sand lenses in the Bar Ck #1 well. This sand was about 27 feet thick and, according to the E-logs, has about 15% porosity. However, based on the log data, there is an indicated 60% water saturation. There is no cross-over shown on the logs and very little, if any, gas was evident from this sand during the drilling operations. It was, therefore, concluded that the evidence of gas was too weak to justify setting casing and completing the well. The Dakota formation was about 75 feet thick in the subject well.

The top of the Cedar Mountain formation was encountered at 1785', according to the E-logs. A well developed sand at 1810' to 1842' (with a small 3 ft. thick shale break) had good porosity, 13% to 21%; but calculations, based on the E-log data, indicate about 100% water saturation. There is a slight cross-over, 3 ft., in the lower portion of the sand. The Cedar Mt. formation was about 100 ft. thick in this well.

The Morrison formation was topped at 1882' and had only one well developed sand lens at the top of the Salt Wash section. This sand at 2136' to 2150' did not give up any gas when drilled and the E-logs indicated that the sand contained water. The logs indicated a porosity of about 16% and a water saturation of 100%. The Morrison was about 422 feet thick in this well.

The Curtis-Summerville section was encountered at 2304'. A sand at 2306' to 2315' was light brown in color, medium-grained, rounded grains and appeared similar to the Entrada sand. However, this was a Curtis sand and after logging, the well had to be deepened to penetrate the top sixty feet of the Entrada formation. The Curtis sand did not have any hydrocarbon shows and the E-logs indicated a porosity of 9%, and a water saturation of 100%. The Curtis-Summerville was about 80 feet thick in this well.

The top of the Entrada formation was encountered at 2385', according to the samples, and contained light tan to clear, medium-grained, rounded sandstone. There were no shows in the samples and the cuttings appeared to be wet. This portion of the hole, 2350' to 2445', was drilled with mud.

The formations with their tops, thicknesses, and datum points, which were encountered in the subject well, as determined from the electric logs, are as follows:

Formation	Depth to Top	Thickness	Datum
Mancos	Surface	1710'	5013' K.B.
Dakota	1710'	75'	3303'
Cedar Mountain	1785'	97'	3228'
Morrison (Brushy B.)	1882'	254'	3131'
(Salt Wash)	2136'	168'	2877'
Curtis-Summerville	2304'	81'	2709'
Entrada	2385'	—	2628'
Total Depth	2445'		

As noted previously, comparison of the above data with similar data on the Bar Creek #1 well indicates that the subject well was about 150 feet higher structurally.

Conclusion

The Bar Creek Unit #5 well was designed to test the potential gas producing reservoirs in lenticular sands in the Dakota, Cedar Mountain, and Morrison formations on top, (or near the top), of the Stateline structure. The results of the well were

very disappointing. Several of the potential sands were present, but did not contain any appreciable accumulation of natural gas. The sands appeared to be flooded due to their shallow depth and proximity to the outcrops farther to the south.

Even though the well was approximately 150 feet higher structurally than the Bar Ck #1 well, which had good amounts of gas in the Dakota and Morrison formations, the accumulation of natural gas in the potential reservoir sands was absent. Thus it is apparent that some mechanism trapped the gas farther down the north flank of the structure.

Faulting has considerable influence on the characteristics of the reservoir sands. These sands are contaminated with clay minerals, gouge, and water when near or on fault zones, thus their favorable reservoir characteristics for natural gas accumulations are destroyed in these areas.

Based on the results of the subject Bar Ck Unit #5 well, and the results of the subsequent Bar Ck Unit #4 well, it is recommended that future wells on the Bar Ck Unit be located on the north flank of the Stateline structure and on the south flank of the Bar-X structure.

W. Don Quigley

W. Don Quigley
Consulting Geologist
AAPG Cert. #1296
APGS Cert. #3038

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.: U-16925

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED NOV 13 1978 DIVISION OF OIL, GAS & MINING

1. OIL WELL ☐ GAS WELL ☐ OTHER: Dry Hole

7. UNIT AGREEMENT NAME: Bar Creek

2. NAME OF OPERATOR: Willard Pease Oil & Gas Co.

8. FARM OR LEASE NAME: Federal-Anschutz

3. ADDRESS OF OPERATOR: 570 Kennecott Bldg., Salt Lake City, Utah 84133

9. WELL NO.: Bar Ck Unit #5

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface: NE. NE. Sec. 30, T 17S, R 26E, S.L.M.
660' fr. N-line and 660' fr. E-line

10. FIELD AND POOL, OR WILDCAT: Stateline

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: NE. NE. Sec. 30-17S-26E S.L.M.

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5003' grd; 5013' K.B.

12. COUNTY OR PARISH: Grand

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	X
REPAIR WELL	☐	CHANGE PLANS	☐				
(Other)				(Other)			

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Subject well was drilled to a depth of 2445' which was 60 feet below top of the Entrada formation and encountered no productive sands. The well was therefore plugged and abandoned as follows:

Plug #1: 2445' to 2300' (145') 50 sks cement - across top of Entrada
Plug #2: 2175' to 2100' (75') 25 sks cement - across top of Salt Wash
Plug #3: 1850' to 1650' (200') 60 sks cement - across Cedar Mt. and Dakota
Plug #4: 175' to 100' (75') 25 sks cement - across bottom of casing
Plug #5: 5' to 0' (5') 10 sks cement - in top of casing w/marker

Location has been cleaned, pits folded-in, recontoured, and seeded. Road has been erased (?).

18. I hereby certify that the foregoing is true and correct

SIGNED W. Don Quigley TITLE Consulting Geologist DATE Nov. 8, 1978

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side